

PicoMiteWeb

Chapter 10

The previous chapter showed how to build a nicer looking webpage. On that webpage 2 values were displayed that simulated a thermometer reading. But both values were the same.

At the end of the chapter there was a small assignment. The question was to change the program and html-code in such a way that each table entry gave a different reading. For those who have missed it, here is the solution. Please edit your program and html.code so we all have the same files on the PicoMiteWeb.

First the program.

The program we are working with is server09.bas so load that in MMEdit and alter it as follows:

```
Dim buff%(512)
WEB ntp 1
PRINT
PRINT "Your IP address is : " + MM.Info(ip address)
PRINT

WEB tcp interrupt serverstart

Do
  randomnum = Int(Rnd(100)*100)
  randomnum2 = INT(rnd(100)*100)
Loop

Sub serverstart
Local p%, t%
For a%=1 To MM.Info(MAX connections)
  LongString CLEAR buff%()
  WEB tcp READ a%,buff%()edit

  p%=LInStr(buff%(),"GET")
  t%=LInStr(buff%(),"HTTP")
  s$=""
  If (p%<>0) And (t%<>0) And (t%>p%) Then
    s%=LGetStr$(buff%(),p%,t%-p%+4)
    Print "String is ",s$
  EndIf
  If Instr(s$,"HTTP") Then
```

```

Print "sending page"
WEB transmit PAGE a%,"nine.html"
EndIf
Next a%
End Sub

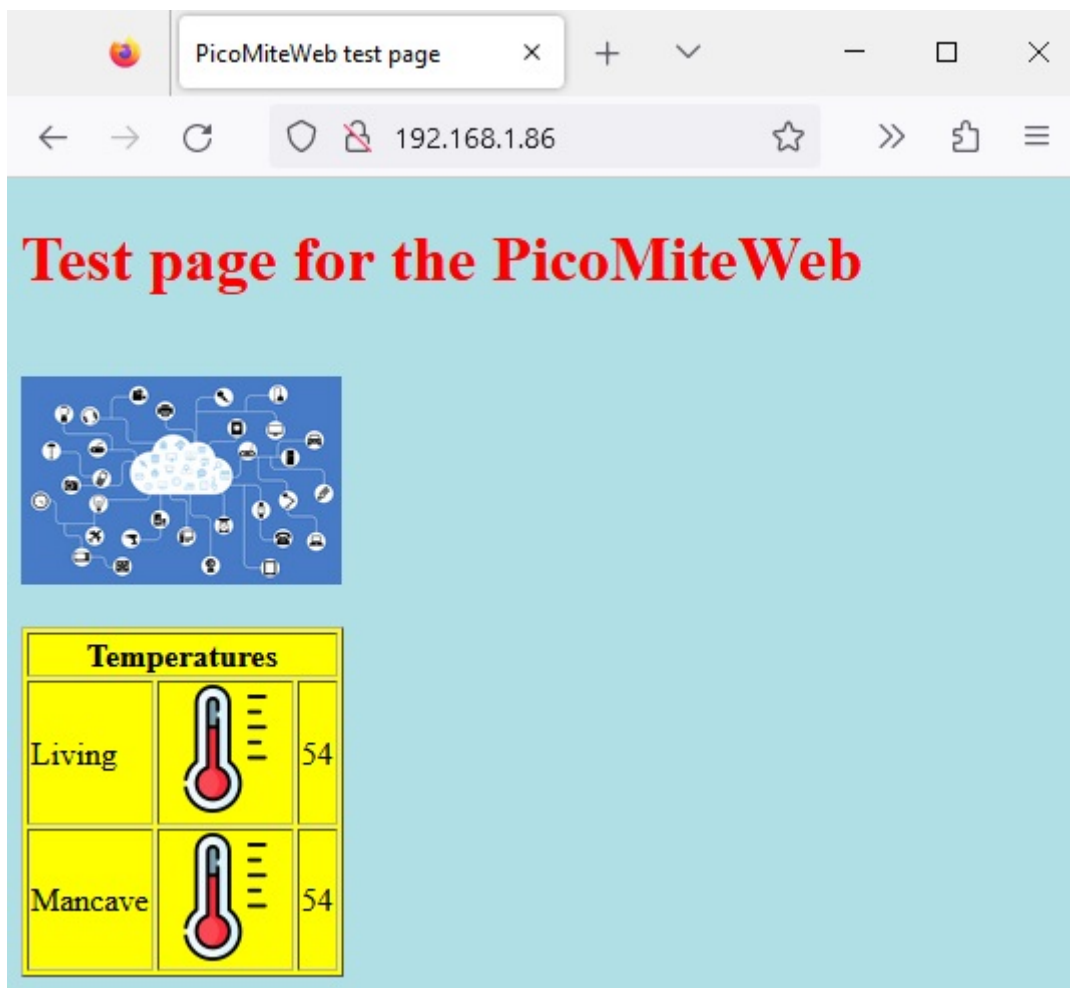
```

Can you see the difference ??
I added 1 line:

```
randomnum2 = INT(rnd(100)*100)
```

This way a second random number is created.

Save this file on your computer and also save it to the PicoMiteWeb. Give it the name "server10.bas"



Now as usual point your browser to the IP address the PicoMiteWeb points to. The webpage is displayed but **nothing changed**.

That is because the HTML file still puts the same value into the table. So we need to

edit the HTML file as well.

The last file we used was "nine.html" load that into MMEdit and alter it as follows:

```
<!DOCTYPE html>

<header>
<title>PicoMiteWeb test page</title>

<meta name="viewport" content="width=device-width,
initial-scale=1.0">

</header>

<body style="background-color: PowderBlue">

<h1 style = "color: red">Test page for the
PicoMiteWeb</h1>
<br>
  
<br>
<br>
<table border="1" style="height:75px; width:75px;
background-color: Yellow">
  <thead>
    <tr>
      <th colspan="3">Temperatures</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td>Living</td>
      <td>
        
      </td>
      <td>{randomnum}</td>
    </tr>
    <tr>
      <td>
        
    </td>
    <td>{randomnum2}</td>
</tr>
</tbody>
</table>

<body>

</html>

```

Save this as "ten.html". Again do that both on your computer as well as on the PicoMiteWeb.

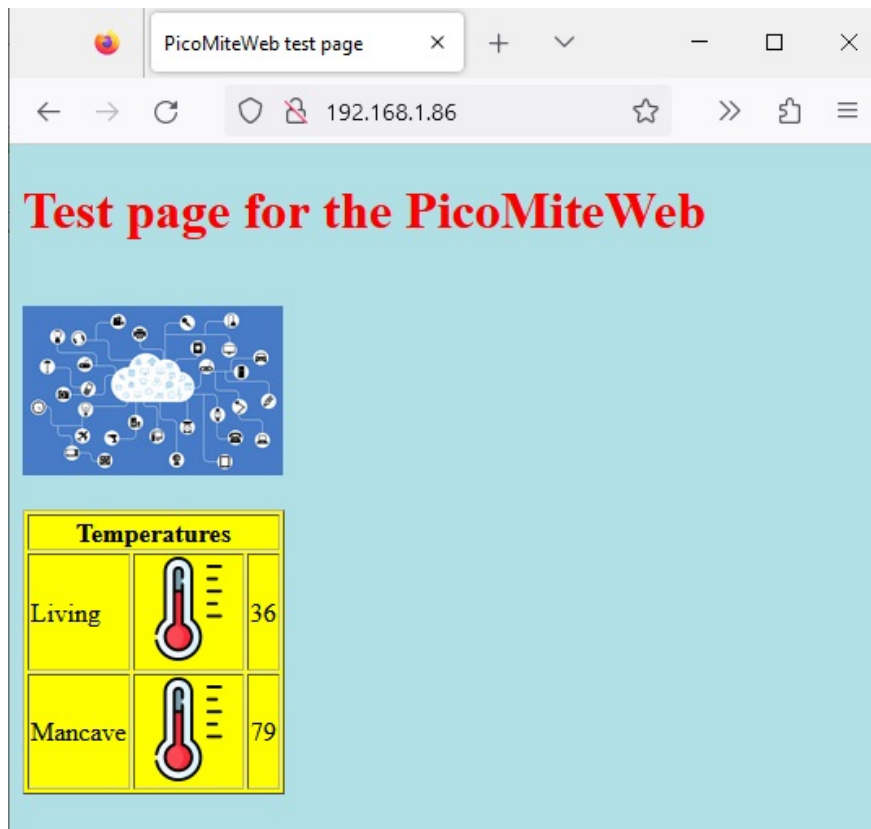
Now do not forget to alter the "server10.bas" program so that it points to the new html file. So alter:

```
WEB transmit PAGE a%,"nine.html"
```

into

```
WEB transmit PAGE a%,"ten.html"
```

And when we start "server10,bas" and point our browser to the IP address of the PicoMiteWeb we should get different values each time as we refresh the web-page.



Sensor readings

Until now we have been sending data from the PicoMiteWeb to a website. This is fun and indeed of practical use.

Connect a sensor to your PicoMiteWeb and start the webserver and you can read it's data from anywhere in your house.

You can change the random generating lines in anything you want/need:

- Attach a Dallas DS18B20
put it in your mancave and read the temperature from your cosy lounge chair.
- Attach a reed contact to your door and you can see if a door is open or closed
- Put a Picomite with a vibration sensor in the cookie jar and you can see if anyone is upto stealing your cookies.
More practical: attach a vibration sensor to your washing machine and when it stops vibrating the machine is ready.
- Put a PicoMiteWeb with a PIR sensor on the stairs and you can see if anyone is sneaking up on you in your mancave
- Attach an LDR to the PicoMiteWeb and you can see if the lights are out in your fridge ;)
<http://lucstechblog.blogspot.com/2017/03/cheapskate.html>
This was a prank I pulled on April-1 2017 in ESP-Basic
Nevertheless this can be usefull to know if you put out the lights in the mancave / shed etc.
- I once attached a rain sensor to an ESP-8266 and got a notification on my screen when it started to rain. So then we could collect the drying clothes from outside.
<https://lucstechblog.blogspot.com/2016/08/rain-sensor-using-esp8266.html>

We are entering the IOT (Internet of Things) scene here and the possibilities are endless. Just use your imagination.

Continuous reading the website.

I can hear you say that this all is well but to read the sensors I have to refresh my webpage every time manually.

And there is of course a solution for that.

Just put the next line into the HTML file:

```
<meta http-equiv="refresh" content="15">
```

Put it in the header section and your page will get updated every 15 seconds automatically !!!

You can change content="15" in anything you like/need. The 15 stands for 15 seconds. So change that in any amount you like.

For lamps and temperatures once in the x minutes is sufficient. Then change the value in x (minutes) * 60 (seconds).

Remember that you can always still refresh the page manually.

The complete HTML file should now look like this:

```
<!DOCTYPE html>
```

```
<header>
```

```
<title>PicoMiteWeb test page</title>
```

```
<meta name="viewport" content="width=device-width,
initial-scale=1.0">
```

```
<meta http-equiv="refresh" content="15">
```

```
</header>
```

```
<body style="background-color: PowderBlue">
```

```
<h1 style = "color: red">Test page for the
PicoMiteWeb</h1>
```

```
<br>
```

```

```

```
<br>
```

```
<br>
```

```

<table border="1" style="height:75px; width:75px;
background-color: Yellow">
  <thead>
    <tr>
      <th colspan="3">Temperatures</th>
    </tr>
  </thead>
  <tbody>
    <tr>
      <td>Living</td>
      <td>
        
        </td>

      <td>{randomnum}</td>
    </tr>

    <tr>
      <td>Mancave</td>
      <td>
        
        </td>
      <td>{randomnum2}</td>
    </tr>
  </tbody>
</table>

<body>

</html>

```

Until now we have made the PicoMiteWeb put information on a webpage. That is already extremely useful. But what about the other way round.

How about putting a button on a webpage and make that do something on the PicoMiteWeb.....

That is something for the next chapter.